

MODULAR PALLET

TECHNICAL FIELD OF THE INVENTION

5 [0001] This invention pertains to a pallet for stacking, storing and displaying merchandise.

BACKGROUND OF THE INVENTION

[0002] Pallets are widely used for stacking, storing, transporting and displaying merchandise. Merchandise stacked on a pallet allows substantial quantities of the merchandise to be easily and economically stored or displayed. Pallets have slots to accept the arms of a lift truck for easily moving heavy loads. In some retail environments, particularly self-serve and warehouse facilities, merchandise is displayed while still on the pallet. It is not always practical or desirable to operate a lift truck in such facilities, particularly when customers are present and when precise pallet positioning is required. Accordingly, it will be appreciated that it would be highly desirable to have an attractive pallet that can be precisely positioned.

SUMMARY OF THE INVENTION

[0003] The present invention is directed to overcoming one or more of the problems set forth above. Briefly summarized, according to one aspect of the present invention, a pallet, comprises a base member having top and bottom surfaces with the top surface defining first and second spaced apart openings near an edge of the top surface. A handle has first and second upright members with bottom end portions removably inserted in the first and second spaced apart openings, and a

horizontal member connecting top portions of the first and second upright members. First and second flanges are attached to the bottom end portions of the first and second upright members with the flanges resting on the top surface

5 when the upright members are inserted in the first and second openings. A plurality of hollow legs extend downwardly from the bottom surface and define a passageway below the bottom surface. A plurality of wheel means, one for each leg of the plurality of hollow legs, are fastened to the base member

10 inside an associated hollow leg and extend downwardly from the base member to an elevation below the associated leg so that the wheel means is free to move the base member.

[0004] The passageways between the legs facilitate use of a lift truck and the wheels allow the pallet to be rolled

15 about. Having a removably attached handle allows the pallet to be precisely positioned on a merchandise floor and to be displayed without the handle allowing for easier access to merchandise. When the handle remains attached, a display panel provides a surface area for displaying product

20 information. Removing the handle allows a bin to be used without interference with the handle thereby providing more space for merchandise. The pallet may have removable shelves instead of a bin when the merchandise is better displayed on shelves.

25 [0005] These and other aspects, objects, features and advantages of the present invention will be more clearly understood and appreciated from a review of the following detailed description of the preferred embodiments and appended claims, and by reference to the accompanying

30 drawings

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] Figure 1 is a perspective view of a preferred embodiment of a pallet with a merchandise bin and handle attached according to the present invention.

5 [0007] Figure 2 is a perspective view of a pallet with a merchandise bin with dividers.

[0008] Figure 3 is a front view of a bin illustrating protrusions for anchoring the bin on the pallet.

10 [0009] Figure 4 is an exploded view of a pallet and handle.

[0010] Figure 5 is perspective view of a pallet with a merchandising display.

[0011] Figure 6 is a bottom view of a wheel well and wheel.

15 [0012] Figure 7 is an exploded view of a pallet with shelves.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0013] Referring to Figure 1, a pallet 10 has a base member 12 with top and bottom surfaces. The top surface defines first and second spaced apart openings 14, 16 near a rear edge of the top surface. The top surface is preferably flat but may have a raised perimeter ridge so that one pallet may be stacked atop another. Preferably, base 12 member is constructed of plastic, fiber glass or other moldable material and may be colored to coordinate with a merchandising floor color scheme or a company logo.

[0014] Referring to Figures 1 and 6, a plurality of hollow legs 18 extend downwardly from the bottom surface and define a passageway below the bottom surface. As illustrated, base member 12 is rectangular with four hollow legs 18 spaced

about the perimeter defining two passageways, one lateral and one transverse, to accommodate the forks of a lift truck and to provide ventilation. Each hollow leg 18 is a wheel well accommodating wheel means 20, such as an actual wheel, a

5 roller, glide, or caster. Each the wheel means 20 is fastened to the base member 12 inside an associated hollow leg 18 and extends, or is extendible, downwardly from base member 12 to an elevation below the lowermost portion of the associated leg so that the wheel means can support the base

10 member and pallet to move the pallet. The type of wheel means can vary depending on the application as is well known in the art. For example, a type of locking wheel can extend lower than the wheel well so that the unloaded pallet can be wheeled about, but would lock to prevent movement when the

15 pallet load reaches a trigger point. Another type of wheel means can be manually locked when the desired position is reached. There are also wheel means that are retractable so that the pallet could rest on its legs after being correctly positioned.

20 [0015] Referring now to Figures 1 and 4, the pallet has an inverted "U" shaped handle 22. The handle 22 has first and second upright members 24, 26 with bottom end portions 28, 30 removably inserted in the first and second spaced apart openings 14, 16 and a horizontal member 32 connecting top portions of the first and second upright members. First and second flanges 34, 36 are attached to the bottom end portions 28, 30 of the first and second upright members 24, 26. The flanges 34, 36 rest on the top surface when the upright members 24, 26 are inserted in the first and second openings

25 14, 16.

30 [0016] A panel 38 can be attached to the first and second

upright members 24, 26 below the horizontal member 32 providing an area for product identification or other information. Cut outs 40 are provided in the top portion of the panel to provide handholds. The handle can be inserted
5 and removed using the handholds and the pallet can be positioned using the handholds.

[0017] Referring again to Figure 1, the top surface of the base member has third and fourth spaced apart openings 42, 44 near a front edge of the top surface. These openings 42, 44
10 receive pins or pegs 46, 48 to anchor a bin 50. The sidewall of bin 50 is closed and the first and second upright members of handle 22 are inside the closed sidewall. The first and second pegs 46, 48 are removably inserted in the third and fourth openings 42, 44 of base member 12 inside the closed
15 sidewall of bin 50.

[0018] Figure 2 illustrates bin 50 with dividers 52 inside the closed sidewall. Dividers are useful for segregating different colors of the same merchandise or vertically arranging certain items, such as fluorescent light tubes,
20 garden implements with handles, baseball bats and the like.

[0019] Figure 3 illustrates another embodiment of a bin 54 with a sidewall and a bottom with two spaced apart downwardly extending legs or protrusions 56, 58 for insertion into the third and fourth openings of the base member. Preferably,
25 the sidewall of bin 54 is closed and the first and second upright members are inside the closed sidewall.

[0020] Figure 5 illustrates a pallet 60 supporting an in-store display 62. The footprint of display 62 is smaller than the top surface of the pallet, but presents an
30 aesthetically appealing appearance because the molded configuration is smooth and continuous unlike conventional

wooden pallets. The top surface of the pallet, as well as the legs, can be used for product identification labels or company logos. In addition, the pallet can be formed in a color to match a floor, decorative motif, or company logo.

5 [0021] Referring now to Figure 7, a pallet 64 has shelves instead of a bin. Shelves are preferred for displaying certain merchandise and for placing merchandise at eye level. A first shelf 66 has a plurality of legs 68 and is positioned on the top surface of the base member of the pallet. Legs 68
10 are detachably attached to the first shelf 66. The top surface has a plurality of leg openings each adapted to removably receive a leg 68 to removably attach the first shelf to the base member of the pallet. As illustrated, there are four legs, and at least two legs are positioned
15 closer to a center of the top surface of the base member than the first and second openings that receive the handle. A second shelf 70 is positioned atop first shelf 66 and spaced therefrom by legs 72 adapted to fit into a plurality of openings in a top surface of the first shelf to detachably attach the second shelf to the first shelf.
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[0022] The shelves may be of a continuous construction or may have a honeycomb structure to reduce weight and increase strength. Shelf openings may be bores through the thickness of the shelf with an internal stop member to limit
25 penetration by the legs. Where the shelf has a honeycomb construction, the opening may be the center of a tube with a stop member to limit penetration by the legs. In some instances, a shelf may be a thin piece of material with upturned and/or down turned edges forming an apron wherein a
30 tube would be attached to each side of the shelf and hidden by the apron. Of course, a top shelf need only have a tube

or opening on its underside, but it is practical to have all shelves identical to limit manufacturing costs. Unwanted openings can be covered with a decal.

[0023] It can now be appreciated that a precisely positionable pallet has been presented. The pallet has a base member with a top surface defining first and second spaced apart openings near an edge of the top surface. Hollow legs extend downwardly from the bottom surface of the pallet and define passageways below the bottom surface. Each hollow leg functions as a wheel well wherein a wheel is fastened to the base member. Each wheel inside a hollow leg extends downwardly from the base member below the leg so that the wheel is free to support and move the base member. An inverted U-shaped handle has its bottom ends removably inserted in the first and second openings. Flanges attached to the bottom end portions of the first and second upright members rest on the top surface of the pallet when the upright members are inserted and properly position the handle.

[0024] The passageways facilitate use of a lift truck to move the pallet about and the wheels allow the pallet to be rolled about and precisely positioned. After positioning, the handle can be removed to display merchandise without the handle allowing for easier access to the merchandise and better appearance. When the handle remains attached, a display panel on the handle provides a surface area for displaying product information or advertising. Removing the handle allows a bin to be used without interference with the handle thereby providing more space for merchandise. The pallet may have removable shelves instead of a bin when the merchandise is better displayed on shelves.

[0025] While the invention has been described with particular reference to the preferred embodiments, it will be understood by those skilled in the art that various changes may be made and equivalents may be substituted for elements 5 of the preferred embodiments without departing from the invention. For example, the bin may be of configurations other than the rectangular configuration described.

[0026] As is evident from the foregoing description, certain aspects of the invention are not limited to the 10 particular details of the examples illustrated, and it is therefore contemplated that other modifications and applications will occur to those skilled in the art. For example, a pallet can be textured and colored to match a concrete floor, or fabric can be attached to match the color 15 and texture of a carpeted floor. Also, the pallets are stackable one atop the other for easy storage when not in use. It is accordingly intended that the claims shall cover all such modifications and applications as do not depart from the true spirit and scope of the invention.